

WHAT IS CLAIMED:

1. A cable reel comprising:
 - a fixed housing;
 - a rotatable housing rotatably connected to said fixed housing;
 - a flat cable positioned within a space defined between said fixed housing and said rotatable housing; and
 - a cable holder positioned on one end of said flat cable, said cable holder containing a joint portion connecting conductor wires of said flat cable and a bus bar, said cable holder including an end portion from which said flat cable extends, said end portion including a flange portion;
- said rotatable housing comprising:
 - a cable holder space configured to contain said cable holder; and
 - a rib member extending from a wall of said rotatable housing adjacent to said cable holder space, said rib member configured such that a first surface of said rib member contacts the end portion of said cable holder, and a second surface of said rib member, which is substantially perpendicular to said first surface, contacts the flange portion.

2. The cable reel according to claim 1, further comprising a guide flap extending from the end portion of said cable holder from which said flat cable extends.
3. The cable reel according to claim 2, wherein said guide flap extends along a surface of said flat cable.
4. The cable reel according to claim 3, wherein the surface of said flat cable is an inner surface.
5. The cable reel according to claim 2, wherein said guide flap is bonded to a surface of said flat cable.
6. The cable reel according to claim 5, wherein the surface of said flat cable is an inner surface.
7. The cable reel according to claim 2, wherein said guide flap is rigid.
8. The cable reel according to claim 2, wherein said guide flap inhibits bending of a portion of said flat cable adjacent to said cable holder.

9. The cable reel according to claim 1, wherein said fixed housing and said rotatable housing are substantially cylindrical, and said flat cable is wound in a predetermined direction within said space defined between said fixed housing and said rotatable housing.

10. The cable reel according to claim 1, wherein said first surface and said second surface of said rib member inhibit bending of the end portion of said cable holder in order to prevent damage to the joint portion and to maintain one end of said flat cable in said cable holder.

11. A cable reel in which a flat cable is positioned between a rotatable housing and a fixed housing, said cable reel comprising:

a cable holder containing a joint portion connecting conductor wires of the flat cable and a bus bar, said cable holder including an end portion from which the flat cable extends;

a cable holder mounting position on the rotatable housing; and

a rib member positioned on the rotatable housing adjacent to the cable holder mounting position, wherein said rib member engages first and second substantially perpendicular surfaces of the end portion of said cable holder.

12. The cable reel according to claim 11, wherein said rib member includes first and second substantially perpendicular surfaces for respectively engaging the first and second substantially perpendicular surfaces of the end portion of said cable holder.

13. The cable reel according to claim 12, wherein said rib member inhibits bending of the end portion of said cable holder in order to prevent damage to said joint portion and to maintain one end of the flat cable in said cable holder.

14. The cable reel according to claim 11, wherein said rib member inhibits bending of the end portion of said cable holder in order to prevent damage to said joint portion and to maintain one end of the flat cable in said cable holder.

15. The cable reel according to claim 11, further comprising a guide flap extending from the end portion of said cable holder from which the flat cable extends.

16. The cable reel according to claim 15, wherein said guide flap extends along a surface of the flat cable.

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17. The cable reel according to claim 16, wherein the surface of the flat cable is an inner surface.

18. The cable reel according to claim 15, wherein said guide flap is bonded to a surface of the flat cable.

19. The cable reel according to claim 15, wherein said guide flap is rigid.

20. The cable reel according to claim 15, wherein said guide flap inhibits bending of a portion of the flat cable adjacent to said cable holder.